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Rhode Island Public Utilities Commission
89 Jefferson Blvd, Warwick, Rhode Island, 02888

**Re: RI PUC Docket 5000, Comments on Draft Examination of the Value of and
Need for Energy Storage Resources in Rhode Island**

Dear Ms. Rodvien,

On behalf of Advanced Energy United (“United”) and the Northeast Clean Energy Council (“NECEC” or “The Council”), thank you for the opportunity to provide these written comments on the draft Staff report, “Examination of the Value of and Need for Energy Storage Resources in Rhode Island” (“Draft Report”).

Advanced Energy United is the only national industry association that represents the full range of advanced energy technologies and services, including wind, solar, hydro, energy storage, energy efficiency, demand response, electric vehicles, the smart grid, grid enhancing technologies, and more. The businesses we represent are lowering consumer costs, creating millions of new jobs, and providing the full range of clean, efficient, and reliable energy and transportation solutions needed to achieve the transition to 100% clean energy in the United States.

NECEC leads the just, equitable, and rapid transition to a clean energy future and a diverse climate economy. NECEC members span the broad spectrum of the clean energy industry, including clean transportation, energy efficiency, wind, solar, energy storage, microgrids, fuel cells, and advanced and “smart” technologies. The Council’s 250+ members include companies based in Rhode Island and those from elsewhere who do business here or hope to make future investments in the state.

Introduction

While the transition to clean energy is currently underway in Rhode Island and the broader region, we need to strategically accelerate the pace. There is critical urgency to decarbonize the energy system to avoid the worst impacts of climate change and to control costs and mitigate risks in a market that is overly reliant on natural gas and other fossil fuels.

Energy storage technologies are an essential component of the clean energy transition and serve multiple functions. They can provide essential reliability services and enhance grid resilience, improve the integration of clean energy resources in a manner that maximizes and optimizes their use, and reduce electricity system peak demand, a major driver of utility costs.

As storage is a relatively new market entrant, smart planning and robust analysis are necessary to understand how to best leverage energy storage as a system asset. As we explain in further detail below, while the Public Utilities Commission (“PUC” or “Commission”) has a relatively narrow statutory charge, Rhode Island policymakers need to take a broad view of storage that includes job growth and economic development, achieving 100% clean electricity, and getting to net zero greenhouse gas emissions.

Finally, while we are grateful for the opportunity to provide these comments; we understand that some stakeholders had expressed concern that the stakeholder process for Docket 5000 seemed to terminate abruptly before participants had the ability to fully contribute and comment on the resulting recommendations.

Comments

The five scenarios laid out by the PUC staff, and the various categories used to group benefits, offer a framework to organize the range of system needs and technology options. It is a useful exercise to contemplate options that address challenges associated with, for example, a cold snap or a distribution line failure. Staff apply the Rhode Island Benefit Cost Framework (“Framework”) to present a list of potential qualitative benefits from storage. It is a snapshot of conditions and considerations to assist the PUC and stakeholder evaluation of storage.¹

The Framework gives illustrative examples of how storage can provide grid and customer services and offer tangible benefits, such as addressing a transmission constraint, or relieving a local distribution constraint during a period of peak demand. The overall approach in Chapter 2 of the Draft Report could be a useful tool to consider storage in different use cases and in a Rhode Island-specific context. For Rhode Island to fully understand the value of storage, it needs to consider the full range of potential use cases, the locations and scale for storage assets, and examine how to stack multiple value streams across wholesale and retail markets. The Draft Report only goes part way to fully examining this potential.

The Draft Report explicitly asserts that the analysis was conducted through the lens of fulfilling obligations for Rhode Island’s Renewable Energy Standard (RES) and the Act on Climate

¹ We encourage Staff to review/revisit the National Standard Practice Manual (NSPM) for DERs, a resource that provides a comprehensive framework for cost-effectiveness of distributed energy resources, including storage. See:

obligations (the “Act”).² Indeed, the conclusion of the Draft Report significantly focuses on those two pieces of legislation. We have concerns that the Draft Report is too narrow in scope and fails to fully address other vital components such as future cost savings and other system benefits.

Senate Resolution 416,³ which initiated the PUC staff analysis into storage, specifically called for an investigation into “reducing costs of electric generation, the transmission system and the distribution system to ratepayers.” The resolution further stipulates that the PUC explore whether new policies are needed to deploy storage to unlock a reliable clean energy supply, lower peak demand, and enable more efficient distribution grid operation.

We have concerns that the PUC staff projection of Rhode Island’s near-term RES compliance paints an untested, rosy picture and ignores the role that storage can play between now and 2032. If we wait on advancing storage until 2032, as recommended in the Draft Report, Rhode Island will lag behind on climate. Regarding the approach in Section 4.2 of using the RES and RECs to satisfy the requirements of the Act on Climate, PUC staff have no way to be sure that the projected RECs will be available for use in Rhode Island. Indeed, given the stringent energy and climate requirements across the region and Rhode Island’s relatively small load, we recommend that Staff apply an appropriate offset for credits that will be applied elsewhere. Importantly, to passively rely on already projected RECs denies Rhode Island the opportunity that comes with developing home grown own renewable energy and energy storage resources here in Rhode Island.

The PUC staff assessment provides a rather static view of energy storage technologies and their application to the power system. In the Draft Report, present-day values on various metrics of performance are used to represent storage attributes.⁴ This is an unrealistic approach because it does not adequately consider long-duration storage and improved battery performance management. It also attributes very little value to greenhouse gas (“GHG”) emissions reduction.⁵ While the PUC Staff do qualify their assessments in the Draft Report,⁶ noting that costs, capabilities, and needs may change over time, that information is not sufficiently incorporated into the analysis or final conclusions. Specifically, Scenario #4 relies on 2022 average values of discharged storage currently deployed and its conclusions do not

² See Draft Report, Section 1.3, at 2.

³ <http://webserver.rilegislature.gov/BillText/BillText22/SenateText22/S3064.pdf>

⁴ See Section 2.1, Scenario #4

⁵ See Section 2.2, Scenario #1

⁶ See Section 2.3 where the PUC acknowledges that value of storage under each scenario may grow as storage costs come down, as well as due to changes in customer demands and increase of intermittent generation.

take into account anticipated development of long-duration storage⁷ (which could presumably benefit from specific programming and support).⁸

The obligations of complying with the Act and RES should indeed be an important focal point for the Draft Report; yet the final report should reflect a broader assessment of storage that includes the value of storage for customers reliability, resilience, and cost-savings. With increases in extreme weather events⁹ in Rhode Island that can damage infrastructure, for example, it is reasonable to anticipate that additional reliability measures will be needed to minimize outages and interruptions of service. Energy storage is well-suited to address those issues. The Draft Report highlights that Rhode Island has a smaller number of outage minutes than the average state, but that does not mean there is no value for storage in reliability.

As the Draft Report is revised, we encourage the PUC Staff to take account of the current dynamics of existing programs. For example, in the Draft Report, PUC Staff notes that the ConnectedSolutions Program¹⁰ has incented customer-sited storage; however, it is not clear whether the Program will continue to be effective in incenting commercial and industrial (C&I) storage because Rhode Island Energy (RIE) is contemplating a change that will cap a C&I battery's incentive at 150% of the host facility's peak load. This is likely to make most of the large C&I batteries currently in the queue uneconomic to build. One proactive step toward incenting battery development that the Commission could take now is to direct RIE not to cap the incentive as planned. That said, we agree with Staff that the four existing storage programs in the state operate as a patchwork and leave significant value on the table. As such, it would make sense to develop one unified storage program. Connecticut's Energy Storage Solutions Program could serve as the model for this. That program provides an upfront incentive plus a performance incentive to storage resources, and locks in the rates for 10 years.¹¹

Advanced Energy United and NECEC respectfully encourage the PUC to consider the following recommendations to enhance the report draft:

As noted earlier, Section 4.2 of the Draft Report should be expanded to include additional review of how storage may serve Rhode Island in the context of supporting reliability needs. We encourage the PUC to explore how to enable more third-party participation in meeting

⁷ <https://www.sciencedirect.com/science/article/pii/S2352152X22017753>

⁸ <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/062723-updated-market-designs-policies-can-accelerate-us-long-duration-energy-storage-growth-expert>

⁹ <https://www.providencejournal.com/story/news/2022/02/18/climate-change-status-each-new-england-state-noaa/6813339001/>

¹⁰ See section 3.2

¹¹ Nearby states have had several years of lessons learned in implementing energy storage incentive and grid services compensation programs. Rhode Island should leverage the experience of successful efforts like the New York Energy Storage Roadmap to quickly design and launch initial storage programs. Our association members would be eager to help Rhode Island accelerate this effort.

distribution system needs. Creating a regulatory framework that facilitates and encourages Rhode Island Energy to procure services from competitive providers of storage and other distributed energy resources will help lower costs to ratepayers and encourage innovation. We need a range of providers and solutions to facilitate the clean energy transition in a manner that is cost-effective, equitable, and prompt. Simply procuring clean energy and RECs will not be sufficient.

We also recommend that the Commission include in the final version of the Report a timeline to support storage-specific tariff development. This will enable transparency and accountability. The development of a tariff should include storage rates for behind-the-meter (BTM) and front-of-the-meter (FTM) storage. We encourage the Commission to review storage proceedings and studies underway in other states, particularly those in New England,¹² to take advantage of the extensive analysis and stakeholder processes that are currently or soon will be underway in Massachusetts and Connecticut, two neighboring states working to develop FTM wholesale distribution tariffs for Energy Storage Solutions (“ESS”). Maine will likely soon follow. Similarly, the New York Energy Storage Roadmap to design and launch initial storage programs represents a proactive, ongoing process that Rhode Island should observe.

These processes have already taken years – learning from them will allow Rhode Island to move expeditiously and avoid unnecessary delays. Otherwise, it will likely be years before a tariff can be approved and projects can be developed and interconnected in response to that tariff. For the sake of time and resources across state agencies, utility companies and other market actors, Rhode Island can and should learn from the experiences of its neighbors.

As Rhode Island—through the PUC, the Office of Energy Resources (OER), and the legislature—develops a set of energy storage policies, we must recognize that time is of the essence. Developing storage projects can be a multi-year process. The state has ten years to meet its 100% renewable electricity target and energy storage is likely to play a significant role in meeting and maintaining it over time. We agree that energy storage centered tariffs will be necessary to effectively and efficiently incorporate ESS into the Rhode Island grid. However, given the uncertainty of energy markets, development patterns, and interconnection processes, United and NECEC urge the PUC to be proactive on storage and drive tariff changes forward expeditiously.

Waiting until 2030 or later to establish a foundation for storage rules carries too much risk for ratepayers, for the storage industry, and the grid. Such a process should commence promptly and have established dates for tariff filings, stakeholder engagement, and Commission review. During the development of the tariff(s), the Commission should take care to recognize the

¹² <https://legislature.maine.gov/doc/3710>

value of allowing asset owners to operate storage systems in ways that maximize their utility to the grid.

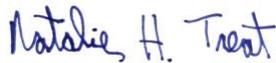
While necessary, tariffs alone will be insufficient to stimulate the development of robust energy storage activities in Rhode Island. In parallel, the PUC and OER should work to develop programs that encourage the deployment of energy storage systems to provide firming for renewables, reliability, and other grid services. Well-designed compensation and/or incentive programs can lead to the type of grid development and innovation needed for Rhode Island to achieve both its climate and renewable energy mandates.

On behalf of Advanced Energy United and NECEC, we appreciate your consideration of our observations and recommendations.

Signed,



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